

Opening Statement of Chairman Tom Davis
“To Lead or To Follow: The Next Generation Internet and the Transition to IPv6”
2:00 pm
June 29, 2005
Committee on Government Reform
2154 Rayburn House Office Building

Welcome to today’s hearing on the Next Generation Internet and the transition to Internet protocol version 6, also known as IPv6.

Nearly thirty years ago in a Department of Defense lab the Internet was born. Originally designed to facilitate communications after a nuclear strike, as the protocols were tested, refined and implemented, people began to recognize the possibilities for far broader applications. Today, these protocols underpin the Internet.

American ingenuity developed, fostered, and fielded these simple open protocols to solve a narrow set of problems. But this seemingly small network solution has sparked a global revolution in communications. Over the past decade, cyberspace has grown into a dynamic nervous system that controls our nation’s critical cyber and physical infrastructures.

Within an hour’s drive of Fairfax County, there are about one quarter of all Internet Service Providers on the entire planet. About a quarter of all the Internet packets in the world are going through a hub in Northern Virginia. If you drive down the Dulles Access Road, you can see the physical impact of the Internet on Virginia.

But the current Internet, and the protocols and networks that underpin it, may have reached its limits. Internet protocol version 6 (IPv6) offers benefits for expanded addressing, greater security, and new products, services, and missions for Next Generation Internet applications. However, it presents several challenges including: (1) understanding the international implications, (2) preparing the federal government, and (3) ensuring a secure transition.

Not surprisingly, interest in IPv6 is gaining momentum around the world, particularly areas that have limited IPv4 address space to meet their industry and consumer communications needs.

Regions that have limited IPv4 address space such as Asia and Europe have undertaken aggressive efforts to deploy IPv6.

Asian countries have been aggressive in adopting IPv6 technology, because Asia controls only about 9% of the allocated IPv4 addresses, and yet has more than half of the world’s population.

Asian governments have invested hundreds of millions of dollars in IPv6 technology. China has been extremely aggressive and Japan has set up an IPv6 Promotion Council, using tax incentives

to encourage research and adoption of IPv6 by its private sector.

Europe currently has a task force that has the dual mandate of initiating country and regional IPv6 task forces across European states and seeking global cooperation around the world. And Europe's Task Force and the Japanese IPv6 Promotion Council forged an alliance to foster worldwide deployment.

Here at home, challenges such as procurement, information technology management, and modernization are often addressed deliberately by the federal government and change often takes years to implement. But these are the challenges we take up on this Committee.

Federal Government IT expenditures are on track to surpass \$65 billion in FY06 – making the federal government once again the largest purchaser of IT products and services in the world. In addition, a recent report forecasts that IT spending will continue to rise throughout the decade, reaching over \$90 billion in fiscal 2010. With this buying power, we need to make sure that best and most secure technology is a priority when the government acquires IT goods and services.

I believe that we all want the United States to have the world's best Information Technology infrastructure, including maintaining the world's best Internet industry.

I believe we all want US defense capabilities to perform with maximum effectiveness and efficiency, and to realize the full potential of net-centric warfare.

I believe we all want the best Homeland Security systems, including cameras, sensors, and first responder systems intelligently integrated together.

I believe we all want fiscally responsible federal spending, including spending on information infrastructures that will deliver multiple returns on investment and preserve taxpayer dollars.

Today, we will hear about federal efforts to transition to IPv6. Our purpose here is to learn from the public and private sectors, to hear if IPv6 can help us achieve long-term economic, defense, homeland security, and technological leadership. If it can play a part in reaching those goals, then I want to know what support the Government Reform Committee, the Congress, and the US federal government need to provide.

I also want to learn about the risk. Every day brings news of another computer intrusion or data theft. I hope hear about the security risks that exist under the current protocol, how IPv6 might address these risks, and whether the transition presents its own risks.

Finally, I hope to learn if the US is at competitive risk with respect to the Next Generation Internet. My committee held a hearing recently about the lengths to which the Chinese government would go to make sure that only Chinese software is purchased by Chinese government agencies. The Chinese government not long ago announced that CERNET2, the first network based on pure IPv6 technology, was going into formal operation. An official from China's National Development Reform Commission said China's Next Generation Internet will

bring huge benefits to their national economy and increase the country's competitiveness in national defense, economy, science and technology.

Last year, I asked GAO to look at IPv6 and its implications for the federal government. Today, we are here, in part, to review their report, which highlights the fundamental challenges facing the federal agencies, the White House, and Congress.

However, to reap the benefits from IPv6 federal agencies must first begin to plan and develop requirements that will take full advantage of what the new protocol offers.

I hope that the Office of Management and Budget will continue its leadership role in information policy and begin to address some essential issues, including how much IP address space the federal agencies may require, whether the federal government is ready for the transition, and how much it will cost.

At this stage, I am gathering input on IPv6. I was pleased to receive a copy of the Department of Defense IPv6 Transition plan recently. I am looking forward to receiving the Department of Commerce's report as soon as possible, and see how IPv6 can help America's economy and help America's exports.

The vast majority of the technology we know and use is rooted in the United States. Many of these innovations were a result of the ideas and hard work from individuals who came from other countries to live, to work, or to be educated -- some of whom are here today. America draws the best and the brightest from around the globe, they produce their best work here, and then we share those efforts with the rest of the world. I am confident that we can meet the challenge of this transition.

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